

Attorney Docket No. AD-9
Application No. 09/803,607

REMARKS/ARGUMENTS

Reconsideration of this application, as amended, is respectfully requested.

The Examiner has objected to claims 4 – 8 under 37 CFR 1.75(c) as being of improper dependent form for failing to further limit the subject matter of a previous claim. Claims 4 – 6 have been cancelled.

The Examiner has objected to claim 7, indicating that a “visual image” is inherently produced simply by the physical presence of the metallurgical containers of claim 1, and that claim 7 does not limit how or in what form the visual image is produced. Claim 7 has been amended to read, “... further comprising the step of ~~producing a visual~~ acquiring an image...” Bases for this amendment may be found at paragraph 2 of page 11, at paragraph 2, page 12, at paragraphs 2 and 3 of page 13 of the specification; and in Figure 1, wherein element 18 is a camera, which is clearly used to “acquire an image.” It is respectfully submitted that the Examiner’s objection to claim 7 has been obviated, and that claim 7 as amended is now allowable.

The Examiner has objected to claim 8, indicating that the “analysis” of the “visual image” is not a further limitation for the same reasons being given with respect to claims 5 and 6, namely that such analysis represents no more than the mathematical manipulation of values with no clear further limiting effect upon any of the physical method steps of independent claim 1. Claim 8 has been amended to read, “wherein said ~~visual~~ image is analyzed to determine a characteristic of the surface of said molten metal, prior to said step of causing said disturbances within said outlet to cease.” It is first noted that “said image” in amended claim 8 now refers to the image of claim 7 that is acquired, rather than the “visual image” of original claim 7.

Attorney Docket No. AD-9
Application No. 09/803,607

It is further noted that claim 8 as amended now indicates that "said image is analyzed to determine a characteristic of the surface of said molten metal, prior to said step of causing said disturbances within said outlet to cease," and therefore such analysis no longer represents mere mathematical manipulation of values with no clear further limiting effect upon any of the physical method steps of independent claim 1. The analysis of the image to determine a characteristic of the surface of the molten metal, prior to the step of causing the disturbances within the outlet to cease, is analogous to the step of paragraph (e) of claim 1, i.e. "analyzing said comparison to determine the existence of said disturbances...and (f) causing said disturbances within said outlet to cease." In each instance, the analyses bear upon the physical method step of causing the disturbances within the outlet to cease. It is respectfully submitted that the Examiner's objection to claim 8 has been obviated, and that claim 8 as amended is now allowable.

The Examiner has rejected claims 1 – 8 under 35 USC 102(b), as being anticipated by United States patent 5,633,462 of Heaslip et al. The Examiner has alleged in particular that the patent of Heaslip et al teaches a method of determining disturbances when discharging molten metal that includes all of the limitations of original claim 1.

The applicants have amended claim 1, adding the further limitation in paragraph (d), "...wherein said comparing said vibrations is done using a time constant;" and the further limitation in paragraph (e), "...[the steps of (a) – (d)] are each conducted ~~substantially simultaneously with~~ within two seconds of each other."

Bases for the amendment of paragraph (d) may be found at paragraph 1 of page 10, paragraph 1 of page 11, paragraph 4 of page 13, and paragraphs 2 – 5 of page 15 of the specification. It is respectfully submitted that nowhere in the specification or

Attorney Docket No. AD-9
Application No. 09/803,607

drawings of the Heaslip patent is there disclosed or suggested the use of a time constant in the method of such patent.

Bases for the amendment of paragraph (e) may be found at the final line of page 18 through lines 1 and 2 of page 19 of the specification. At lines 1 – 2 of page 19, the specification reads, "...steps which are separated in time from each other by no more than 60 seconds." Clearly, the limitation of the steps of amended claim 1 being "within two seconds of each other" is within the limitation of 60 seconds recited in the specification.

In contrast, the method of Heaslip et al is in fact a serial process, and one in which the steps thereof occur over a span of greater than three seconds. At lines 12 – 17 of column 7 of such patent, it is disclosed,

"To generate the calibration spectrum, the vibration of the flow of the liquid metal 12 passing through the ceramic tube 20 is analyzed by the signal processor 36 in the manner described above for approximately three to fifteen seconds. This information is then fed into comparator 42."

Nowhere in the Heaslip patent is it disclosed or suggested that such steps are performed within two seconds of each other, and the steps as recited in the Heaslip patent are taught to occur over a considerably longer time frame.

Claim 1 has also been further amended in paragraph (a), wherein the language, "directly or indirectly" has been deleted, as such recitation of limitations in the alternative is improper.

It is respectfully submitted, that claim 1 as amended, with the additional limitations of paragraphs (d) and (e) therein, is therefore now allowable. It is further

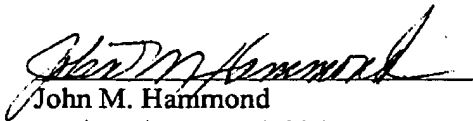
Attorney Docket No. AD-9
Application No. 09/803,607

respectfully submitted that claims 2 and 3, being dependent upon claim 1 which is allowable, are also now both allowable. It is further respectfully submitted that claims 7 and 8 as amended, being dependent upon claim 1 which is allowable, are also now both allowable.

By the instant amendment, applicants have amended their case, thereby placing claim 1, and claims 2, 3, 7, and 8 dependent thereupon, in allowable form. It is respectfully submitted that with the instant amendment, the applicants' case is now allowable, and allowance thereof is respectfully requested. Applicants have also included a Petition for an Extension of Time for a period of 3 months, and hereby authorize the charge of \$475.00 for payment of the fee for such an extension to Deposit Account 50-2753.

If for any reason the Examiner believes that a telephone conference might facilitate the prosecution of this case, he is respectfully requested to call Applicants' agent, John M. Hammond. In the event that any additional fees are due, please charge such fees to Deposit Account 50-2753.

Respectfully submitted,



John M. Hammond
Registration No. 52,986
Agent for Applicant(s)
Howard J. Greenwald, P.C.
349 West Commercial Street, Suite 2490
East Rochester, New York 14445
(585) 387-0285

RECEIVED
CENTRAL FAX CENTER

OCT 23 2003

OFFICIAL